

***Knowing and Doing, Connected via Technology:
Influence of Online Service-Learning
on Student Outcomes***

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**Background: Service-Learning /
Online Instruction**

- IARSLCE call for proposals: “How are students... coming to learn new ideas– what are the tools they are using? Are they effective and how do we know that?”
- Growing interest in online and “e”-service-learning
- Online instruction: “not only compatible with but enhances and extends the aims of service-learning” (Dailey-Hebert et al., 2008)



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Interplay between Online & SL

- Online components can potentially...
 - Free more class time for SL activity
 - Help prepare students for community work
- Service-learning with online components can...
 - Restructure faculty/student roles
 - Counteract some disadvantages of all-online instruction (e.g., lack of face-to-face interaction)



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However, need more investigation...

- These assertions mostly from case studies
- Need research “to **compare the outcomes of [online service-learning] to those in traditional service-learning experiences**, especially in areas related to performance differences in learning outcomes, civic engagement, professional development, and more”
(Waldner et al., 2012, p. 126)



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Objectives

- Investigate civic, academic and professional student learning outcomes from service-learning courses with differing levels of online discussion



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Institutional Context

- Large public research university in high-poverty, mid-sized city
 - ~34,000 students
 - Land- and sea-grant
 - Strong public service mission
 - Carnegie elective Community Engagement Classification 2010
 - Office of Service-Learning established 2005



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Snapshot of Courses

- ~13,000 course sections per semester
- >180 courses / >300 sections incorporating service-learning
- >50 courses with “S” suffix
- ~230 courses with “E” suffix (>50% online)
- Pre-loaded online support “shell” via “e-Learning Commons”; about 3,000 sections/semester populated with content



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Instrument

- End-of-course questionnaire
- 67 items (open-ended, Likert, multiple choice), including Toncar et al.'s (2006) SELEB scale; Community-Based Learning—Student Survey (Gelmon et al., 2001); institutional variables of interest; demographics, etc.
- Piloted in 2007; modifications in 2009, 2012
- See <http://servicelearning.uga.edu/sl-course-survey/>
- Voluntary participation, recruitment via instructors



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Participating Courses

- Fall 2009-Fall 2011 administrations
- 54 unique courses / 84 sections: 26 departments
- undergrad, grad, professional levels
- Most common service activities reported:
 - Tutoring (34.7%)
 - Educational activities (24.3%)
 - Consultation (9.3%)
- Reported 45% of class time on service activity, average of 33.5 hours/semester (SD 37.1)



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Participants

- 1290 students (49.1% of available in these courses)
- Majority female (66.5%); white (73.4%); without prior SL experience (55.5%)
- Median age 20
- 44.7% seniors, 21.7% juniors; 10.2% sophomores; 7.2% freshmen
- 10.8% masters; 0.8% doctoral; 4.3% professional programs



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Selection Variable: Online Discussion

- “To what extent did your course emphasize the following: Online (e.g., eLC) Discussion”
- Forced-choice possibilities recoded to dummy:
- “very much” (15.5%), “quite a bit” (11.5%), “some” (18.0%) → **online-supported discussion**
- “very little” (43.7%), “does not apply” (11.3%) → **not online**



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Outcome Variables

- From questionnaire items with 5-point Likert scales (5=strongly agree), composite variables:
 - **Moral Reasoning** (7 items, $\alpha=.891$)
 - **Professional Skills** (6 items, $\alpha=.851$)
 - **Commitment to Service** (4 items, $\alpha=.813$)
 - **Improved Academic Learning** (2 items, $\alpha=.806$)
- One individual item, **Improved Relationship with Instructor**



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Analyses

- Independent Samples t-tests comparing responses from students reporting online-supported discussion or not
- Family-wise $p < .05$, Bonferroni correction to $p < .01$ for five comparisons



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Results: Descriptives

Outcome Variable	Group	N	Mean	SD	St. Er. Mean
Moral Reasoning	Online	552	4.18	.657	.028
	Not Online	635	3.99	.718	.028
Professional Skills	Online	554	4.15	.639	.027
	Not Online	637	3.94	.694	.028
Commitment to Service	Online	554	4.45	.589	.025
	Not Online	636	4.30	.701	.028
Academic Learning	Online	553	4.31	.694	.030
	Not Online	633	4.08	.876	.035
Relationship with Instructor	Online	548	4.14	.947	.040
	Not Online	633	4.08	.876	.035



Results: t-tests

Outcome Variable	<i>t</i>	df	<i>p</i>	Cohen's <i>d</i>
Moral Reasoning	4.536	1185	.000*	0.26
Professional Skills	5.512	1189	.000*	0.32
Commitment to Service	4.021†	1186.5	.000*	0.23
Academic Learning	5.213†	1173.1	.000*	0.30
Relationship with Instr.	3.412	1180	.001*	0.20

†equal variances not assumed

*significant at/below $p=.01$ (two-tailed)



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Critical Reflection

- A high-impact practice regardless of modality
- Could these outcomes simply reflect *more* overall reflection...?
- Follow-up analysis: students also rated frequency of “journaling/reflective writing”
- Correlation between online & reflection:
 $r(1170)=.10$; $p=.001$
- But, R-squared of .01, so only 1/100th of variance explained...



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Discussion

- Waldner et al. (2012) identify as best practices online:
 - Regular and active communication through online tools
 - Highly visible instructor involvement & feedback
- As relationship with instructor was better with more online discussion, perhaps driven by this more-intense online involvement?



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Limitations

- Not all students responded
- Not all SL courses at our university participated
- All from a single university
- Instrument and administration
 - Voluntary
 - Post-hoc only
 - Self-report
- Need more data on actual ways in which online components structured and instantiated



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Directions for Additional Research

- Waldner et al. (2012) caution sensitivity to structural differences from different kinds of “e-service-learning”
- However, our data do not allow for differentiation of how the online components were/were not used by instructors in particular courses
- Potential to follow-up to find out what kinds of activities, frequency, and interaction provided in these courses



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Student- vs. Course-Level Features

- Students in same course not necessarily rating the level of online discussion the same
- Suggests that students experiencing differing levels of online discussion/activity
- Perhaps reflects different student (or instructor) preferences, expectations, and activity? Or, could be that students are reporting incorrectly...



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Conclusions

- Despite limitations, results do support incorporation of online and SL pedagogies
- Also provides baseline data to show impact of particular practices
- Serves as jumping-off point for future research investigating details



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Appendix:

- Survey Items (following)



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Moral Reasoning Survey Items

- The service-learning project in this course helped me better understand people of different ages, abilities, cultures, or economic backgrounds.
- The service-learning project in this course encouraged me to seek additional opportunities to learn about people of different ages, abilities, cultures, or economic backgrounds.
- The service-learning project in this course made me aware of some of my own biases and prejudices.
- The service-learning project in this course helped me clarify my personal values.
- The service-learning project in this course required me to make judgments about how to behave in new social settings.
- The service-learning project in this course made me more aware of my possible impact on others.
- The service-learning project in this course helped me reconsider some of my former attitudes about social problems.



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Professional Skills Survey Items

- Through the service-learning project in this course, I enhanced my ability to manage my time efficiently.
- Through the service-learning project in this course, I enhanced my ability to plan a project.
- Through the service-learning project in this course, I enhanced my ability to review my work and evaluate my success at attaining my goals.
- Through the service-learning project in this course, I enhanced my ability to work as a member of a team.
- Through this course, I developed a greater sense of personal responsibility for my own learning.
- The knowledge I gained in this course has made me more marketable in my chosen profession.



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Commitment to Service Survey Items

- After this course is over, I will probably volunteer or participate in some way with the community or individuals served by this course.
- Service-learning courses like this one can provide real benefits to people in the community.
- The work I did in this course benefited some segment of the community.
- I would be interested in participating in other courses with a service-learning component.



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Academic Learning Survey Items

- The service-learning project in this course helped me see how the material covered in this course can be useful in everyday life or other situations.
- The service-learning project in this course helped me better understand the subject matter of this course.

Relationship with Instructor Survey Item:

- My relationship with the course instructor or teaching assistant was more positive as a result of the service-learning activity



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